

SECTION III—REMARKS

This amendment is submitted in response to the Office Action mailed February 7, 2007. Claims 1 and 21 are amended, and claims 1-8, 11 and 21-28 remain pending in the application. Applicant respectfully requests reconsideration of the application and allowance of all pending claims in view of the above amendments and the following remarks.

Rejections Under 35 U.S.C. § 103

The Examiner rejected claims 1-8, 11, and 21-28 under 35 U.S.C. § 103(a) as obvious in view of, and therefore unpatentable over, various combinations of the following references: U.S. Patent No. 5,705,096 to Kano *et al.* (“Kano”), U.S. Patent No. 3,919,377 to Dow *et al.* (“Dow”); U.S. Patent Application Publication No. 2006/0050187 to Hirai *et al.* (“Hirai”); and Japanese Patent No. JP58-100121 to Katsuyuki (“Katsuyuki”).

Applicant respectfully traverses the Examiner’s rejections. To establish a *prima facie* case of obviousness, the Examiner must establish that three criteria are met: (1) the prior art references must teach or suggest all the claim limitations; (2) some suggestion or motivation to combine the references must be found in the prior art; and (3) there must be a reasonable expectation of success. MPEP § 2143. For at least the reasons explained below, Applicant respectfully submits that the Examiner has not established a *prima facie* case of obviousness.

Claim 1 was rejected as obvious in view of, and therefore unpatentable over, two different combinations of references: *Kano* in view of *Dow*, and *Kano* in view of *Katsuyuki*. As amended, claim 1 recites a process combination including:

applying a polymer film to a transparent substrate;
optionally conditioning the polymer film; and
imprinting a plurality of microgrooves in the polymer film by pressing a contact surface of a tool against the polymer film and *oscillating the contact surface in the plane of the polymer film*, the contact surface having a pattern formed therein including a plurality of microgrooves.

(italics added). The Examiner alleges that *Kano* discloses every element and limitation of this claim except for oscillating the grooving tool. To make up for this deficiency in *Kano* the Examiner cites both *Dow* and *Katsuyuki* for their alleged disclosure of oscillating the grooving tool and concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine *Kano* with *Dow*, or *Kano* with *Katsuyuki*, to arrive at the claimed invention.

Applicant respectfully disagrees. *Dow*, in figure 3, discloses a hot melt that is extruded as a film 1 from extruder 2 and passes through the nip between needle comb 11 and roller 4 and away between rollers 5 and 6. Needle comb 11 is made up of individual needles 11, and *Dow* discloses at col. 3, lines 2-4, that various arrays of needles and oscillation of the needles are possible. At the location that needles 11 contact the polymer film the film is stretched over curved surface 13 of roller 4. The polymer is therefore not planar at that point and the needles cannot oscillate “in the plane of the polymer film” because the polymer film is not in a plane. Even if the polymer were in a plane, *Dow* provides no disclosure, teaching or suggestion whatsoever as to how needles 11 should oscillate. In particular, but since the goal of *Dow* is to form a film having

substantially parallel longitudinal grooves (col. 1, lines 34-36), is strongly suggests that any oscillation should be toward and away from roller 4, meaning that the oscillation would be out of the plane of the polymer film, not “in the plane of the polymer film.” *Kano* and *Dow*, when combined, therefore cannot disclose, teach or suggest a combination including pressing the contact surface against the polymer film and “oscillating the contact surface in a plane of the polymer film.”

Katsuyuki, in figure 5, shows a plate 11' with a curved contact surface 12. The drawing only shows plate 11' in two positions, and it appears from the figure that plate 11' is placed on the indium electrode in the first position, rolled from the first position to the second position, and then removed from the indium electrode leaving behind the grooves. This, however, is not oscillation; oscillation would require at least one cycle in which plate 11' moves from the first position to the second position and back to the first position. Thus, *Katsuyuki* does not disclose oscillation of the contact surface. Moreover, even if *Katsuyuki* did disclose oscillation, the contact surface is curved and such oscillation would therefore not be oscillation “in the plane of the polymer film.” *Kano* and *Katsuyuki*, when combined, therefore cannot obviate a combination including the recited limitations.

For at least the reasons above, Applicant submits that the two combinations attempted by the Examiner—*Kano* combined with *Dow* and *Kano* combined with *Katsuyuki*—cannot obviate claim 1 and respectfully request withdrawal of the rejection and allowance of the claim.

Regarding claims 2-8 and 11, if an independent claim is non-obvious, then any claim depending therefrom is also non-obvious. MPEP § 2143.03; *In re Fine*, 837 F.2d

1071 (Fed. Cir. 1988). As discussed above, claim 1 is in condition for allowance. Applicant submits that claims 2-8 and 11 are therefore allowable by virtue of their dependence on an allowable independent claim, as well as by virtue of the features recited therein. Applicant therefore respectfully requests withdrawal of the rejections and allowance of these claims.

Claim 21 was rejected as obvious in view of, and therefore unpatentable over, two different combinations of references: *Kano* in view of *Dow*, and *Kano* in view of *Katsuyuki*. Claim 21 recites a process combination including:

providing a transparent substrate having a polymer film applied on one side thereof;

providing a tool having a contact surface, the contact surface having a plurality of microgrooves formed thereon;

pressing the contact surface against the polymer film; and

oscillating the contact surface in a plane of the polymer film.

(emphasis added). By analogy to the discussion above for claim 1, the two combinations attempted by the Examiner—*Kano* combined with *Dow*, and *Kano* combined with *Katsuyuki*—cannot obviate claim 21. Applicant therefore respectfully requests withdrawal of the rejection and allowance of the claim.

Regarding claims 22-28, if an independent claim is non-obvious, then any claim depending therefrom is also non-obvious. MPEP § 2143.03; *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). As discussed above, claim 21 is in condition for allowance. Applicant

submits that claims 22-28 are therefore allowable by virtue of their dependence on an allowable independent claim, as well as by virtue of the features recited therein. Applicant therefore respectfully requests withdrawal of the rejections and allowance of these claims.

Conclusion

Given the above amendments and accompanying remarks, all claims pending in the application are in condition for allowance. If the undersigned attorney has overlooked a teaching in any of the cited references that is relevant to allowance of the claims, the Examiner is requested to specifically point out where such teaching may be found. Further, if there are any informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact the undersigned attorney at (206) 292-8600.


Charge Deposit Account

Please charge our Deposit Account No. 02-2666 for any additional fee(s) that may be due in this matter, and please credit the same deposit account for any overpayment.

Respectfully submitted,

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